Off-Body Transmission Range Improvement for Hearing Instruments by the Use of Ear-to-Ear Communication - DTU Orbit (08/11/2017)

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A novel idea for improving the off-body transmission range for hearing instruments is presented. The idea is to use the ear-to-ear communication to improve the range. If one of the hearing instruments loses the connection to an off-body accessory it can reestablish the connection through the other hearing instrument. The median improvement of the measured and simulated gain of the hearing instrument is 9.7 dB and 7.0 dB, respectively. This corresponds to a transmission range improvement of 204% and 123% under free-space conditions and 74% and 49% if a ground reflection is assumed.

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